

REMARKS

The Office Action dated May 17, 2004 has been reviewed and the Examiners' comments carefully considered. Prior to this amendment, Claims 1, 3-13, 15, 17 and 18 were pending in the application.

After amending the claims as set forth above, claims 1, 3-13, 15, 17-20 are now pending in this application.

Applicants respectfully request reconsideration of the present application in view of the above amendments and for the reasons that follow.

In support of Applicants' request for reconsideration, Applicants submit a declaration in a separate letter along with this reply, the contents of which are incorporated herein by reference.

Recordation of Substance of Interview

In view of the Personal Interview held on May 12, 2004, Applicants submit that the Interview Summary (a copy of which is attached) provides a complete and proper recordation of the substance of the interview, per MPEP §713.04.

Applicants sincerely thank Examiner Savage for extending the courtesy of the in-person interview.

Indication of Allowable Subject Matter

Applicants thank Examiner Savage for indicating that claims 13, 15, 17 and 18 contain allowable subject matter. As seen above, Applicants have placed these claims into independent form, and respectfully submit that the claims are in condition for allowance.

Rejections Under 35 U.S.C. §§ 102/103

Independent claim 1 stands rejected under 35 U.S.C. §102(b) as being anticipated by Ishibe (EP 0 561 001) and under 35 U.S.C. §103(a) as being obvious in view of Ishibe. Independent claim 10 stands rejected under 35 U.S.C. §103(a) as being obvious over Ishibe in view of De Bruyne (USP 4,983,467). The dependent claims stand rejected variously as being anticipated or obvious in view of the just cited references and variously further in view of Fisher (USP 3,437,457). In order to advance prosecution, as seen above, claims 1 and 10 are amended, and Applicants respectfully request reconsideration of the claims for the reasons that follow.

Claim 1 and its Dependencies

Claim 1 has been amended to recite that **each** layer of the filtering structure comprises a **non-woven** web of metal fibers which has been sintered. Applicants submit that Ishibe fails to teach or suggest such a structure, and thus claim 1 cannot be anticipated per the requirements of MPEP § 2131 or obvious per the requirements of MPEP § 2143.

The term ***non-woven web*** cannot be construed to mean a material made up of the fibers Ishibe utilizes to form his particle layer 3, identified in the office action as satisfying either of the first layer or the second layer of claim 1. This is because Ishibe does not teach the use of fibers longer than 0.225 mm to make particle layer 3.¹ Applicants respectfully submit that the person of ordinary skill in the art would recognize that a “non-woven web of metal fibers” could only be construed as meaning a material made from fibers having a length greater than 0.225 mm, the maximum length specified in Ishibe.

¹ At page 6, lines 34-35, Ishibe teaches the use of “metal short fiber” having an aspect ratio of between 2 to 15 to make particle layer 3, where the aspect ratio is a value obtained by dividing the length of short fibers by its diameter. At page 6, lines 14-15, Ishibe teaches that the metal short fibers have a fiber diameter of 0.5 to 15 μm . When these diameters are applied to the above mentioned aspect ratios, the artisan of ordinary skill would understand that Ishibe teaches the use of a fiber having a maximum length of .225 mm to make particle layer 3.

In support of this, the Applicants provide a **declaration** submitted in a separate letter along with this response. The declarant, who's education and experience qualifies him to speak to how one of ordinary skill in the art would construe the term "non-woven web," makes it clear that Ishibe does not teach such a web. The declarant also makes clear that Ishibe does not suggest such a web and that Ishibe, at page 6, lines 35-40, discourages the skilled artisan, from using fibers longer than 0.225 mm, both by indicating that fiber lengths greater than 0.225 mm result in an inadequate particle layer 3, and by indicating that a preferred embodiment of layer 3 utilizes fiber lengths less than or equal to 0.032 mm, thus discouraging one of ordinary skill in the art from using lengths longer than a fraction of a millimeter.² Therefore, the skilled artisan would not attempt to make the particle layer 3 of Ishibe with metal short fibers having a length greater than 0.225 mm.

In sum, claim 1 is neither anticipated nor rendered obvious by Ishibe. Claims 3-9, claims that depend from claim 1, stand rejected as being either anticipated by Ishibe or as being obvious in view of Ishibe when combined with various other references. Applicants respectfully submit that since Ishibe does not teach each and every element of claim 1, and none of the other cited references remedy the deficiencies of Ishibe, these claims are likewise allowable.

Claim 10 and its Dependencies

As noted above, independent claim 10 also stands rejected as being obvious over Ishibe in view of De Bruyne. Applicants have amended claim 10, and respectfully submit that because claim 10 recites a plurality of **non-woven webs**, the claim is allowable for the same reasons that make claim 1 allowable, as discussed above. Specifically, Ishibe does not teach or suggest a plurality of non-woven webs in contact with one another, as discussed above, and De Bruyne fails to remedy this deficiency of Ishibe. Thus, claim 10 and the

² At page 6, lines 35-40, Ishibe teaches that metal short fibers having an aspect ratio over 15 results in an *inadequate* particle layer 3, and that aspect ratios should preferably lie in the range of 4 and 8. Further, at page 6, lines 18-19, Ishibe teaches that metal short fibers having a diameter of 15 μm or greater results in an inadequate particle layer 3, and that the diameters should preferably lie in the range of 0.5 to 4 μm . Thus, the preferred embodiment of layer 3 utilizes fiber lengths less than or equal to 0.032 mm (8 x 4 μm).

claims that depend from claim 10 are allowable for at least this reason. Allowance of these claims is respectfully requested.

New Claims 19 and 20

New claim 19 recites a layered filtering structure comprising at least a first layer on a second layer, **each** layer comprising a web of metal fibers which has been **separately** sintered. Assuming *arguendo* that Ishibe teaches a filter comprising two webs of metal fibers, each of these alleged webs are not **separately** sintered. True, layer 2 (identified in Ishibe as the “support layer”) appears to be sintered. However, the particles that form layer 3 are merely deposited onto the support layer 2. In Ishibe, deposition is accomplished by immersing the support layer of Ishibe (which can be formed from long fibers) in a suspension of particles and evacuating the suspension through the support layer. As the support layer “filters” the particles from the suspension, the particles accrete on the support layer, and a second layer is thus formed. Only afterwards is the combined body formed by layers 2 and 3 sintered. Thus, layer 3 is not separately sintered, and, therefore, Ishibe fails to disclose each and every element of claim 19. Ishibe further fails to suggest a separately sintered web, since the layer 3 never exists independently of layer 2, and to incorporate an independent sintered layer would change the principle of operation of Ishibe, which relies on accretion of particles on the layer 2. In sum, claim 19 is neither anticipated nor obvious in view of the cited references. Claim 20 is allowable at least due to its dependency and due to the fact that Ishibe does not teach or suggest a filter having two non-woven web layers, as detailed above in regard to claim 1.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment,

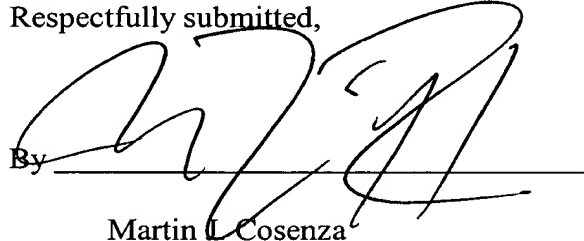
to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Examiner Savage is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application

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Respectfully submitted,

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